

**2009-2010** TENNESSEE GUIDE TO

# **TRANSPORTATION EQUIPMENT**

Tennessee Department of Economic & Community Development



# Transportation Equipment Manufacturing

Industries within this subsector produce equipment for transportation of passengers and cargo by land, air and water. Included are motor vehicles, aircraft, guided missiles, space vehicles, ships, boats, railroad equipment, motorcycles, bicycles, snowmobiles and numerous other conveyances.

The significance of the Transportation Equipment industry is due, in large part, to its sizeable market share as well as the economic impact of the subsector in North America. In Tennessee, this industry provides a stable labor market with high skill employment at competitive wages. Most of this industry is concentrated in Central and Eastern Tennessee with facilities located in 90 out of the 95 Tennessee counties. As of 2007 there were 409 facilities. Employment within the transportation equipment manufacturing sector exhibited nearly a twenty-eight percent (28%) rate of growth rising from 46,600 in 1991 to 59,613

in 2007. The average annual wage in this industry was \$49,888 in 2007.

From 2000 to 2006 the Transportation Equipment manufacturing industry increased its output from \$4,756,000,000 to \$8,213,000,000. The output from this industry made up 19.8% of Tennessee's Manufacturing GPD Output is estimated to increase an additional 13.6% to \$9,329,000,000 through 2012.

All transportation equipment production facilities fall into one of seven industry groups: motor vehicle manufacturing, motor vehicle body & trailer manufacturing, motor vehicle parts manufacturing, aerospace product and parts manufacturing, railroad rolling stock manufacturing, ship and boat building, and other transportation equipment manufacturing. A description of each group's function and operation follows.

## DID YOU KNOW?...

- **Tennessee is the 5th largest producer of cars.**

– *Automotive News Magazine 2007 Market Data Book (2007 production data)*

- **Tennessee is the 9th largest in light truck manufacturing.**

– *Automotive News Magazine 2007 Market Data Book (2007 production data)*

- **The first U.S. based Nissan is located in Smyrna.**

<http://www.nissan-global.com/GCC/Japan/History/history/index-e.html>



## MOTOR VEHICLE MANUFACTURING

This sector encompasses facilities primarily engaged in the production and assembly of automobiles, trucks, utility vehicles and commercial trucks and vehicles.

- There are six establishments in this sector employing approximately 12,569 people.
- The average wage per worker is \$75,303.
- The largest facility is the Nissan Plant in Smyrna (Rutherford County), which employs about 4,400.



Photo courtesy of Nissan NA

Sources: 2009Tennessee Economic Report to the Governor  
North American Industrial Classification System 2007  
2007 Trend Data, ECD Research and Planning  
Harris InfoSource, 2008

## MOTOR VEHICLE BODY & TRAILER MANUFACTURING

This industry comprises establishments primarily engaged in (1) manufacturing motor vehicle bodies and cabs or (2) manufacturing truck, automobile and utility trailers, truck trailer chassis, detachable trailer bodies, and detachable trailer chassis. The products made may be sold separately or may be assembled on purchased chassis and sold as complete vehicles. Motor homes are units where the motor and the living quarters are contained in the same integrated unit, while travel trailers are designed to be towed by a motor unit, such as an automobile or a light truck.

- There are 63 establishments in this industry employing 2,315 people.
- The average wage for workers in this industry is \$39,022.
- There are five facilities in Middle and East Tennessee with 100 or more employees located in Hamblin, Hamilton, Montgomery, and Sumner counties.

## MOTOR VEHICLE PARTS MANUFACTURING

This subsector includes establishments engaged in manufacturing motor vehicle gasoline engines and engine parts, motor vehicle electrical and electronic equipment, vehicular lighting equipment, steering and suspension components (excluding spring), brake systems, transmission and power train parts, seating and interior trim, metal stamping and other motor vehicle parts.

- There are 251 establishments in this sector employing approximately 37,029 people.
- The average wage per worker is \$42,989.
- The largest of these establishments is Denso Manufacturing Tennessee, Inc. located in Maryville (Blount County), employing about 2,400 people.
- There are four other facilities each with more than 1,000 employees located in Coffee, Dekalb, Franklin, and Hamblen counties.

## **AEROSPACE PRODUCT AND PARTS MANUFACTURING**

This industry comprises establishments primarily engaged in the (1) manufacture of complete aircraft, missiles, or space vehicles; (2) manufacture of aerospace engines, propulsion units, auxiliary equipment or parts; (3) development and production of prototypes of aerospace products; (4) aircraft conversion (i.e., major modifications to systems); and (5) complete aircraft or propulsion systems overhaul and rebuilding (i.e., periodic restoration of aircraft to original design specifications).

- There are 21 establishments in this industry employing 2,157 people.
- The average wage for workers in this industry is \$61,351.
- The largest establishment of this industry is Vought Industries employing 1,300 in Davidson County.
- It is followed by Standard Aero Inc, employing approximately 280 in Blount County and Goodrich Corporation employing 200 people in Coffee County.

## **RAILROAD ROLLING STOCK MANUFACTURING**

This industry comprises establishments primarily engaged in the manufacture of (1) locomotives, locomotive frames and parts; (2) street, rapid transit cars and car equipment for operation on rails for freight and passenger service; and (3) manufacturing rail layers, ballast distributors, rail tamping equipment and other railway track maintenance equipment.

- There are five establishments in this industry employing 36 people.
- The average wage per worker is \$36,424.



## **SHIP AND BOAT BUILDING**

This sector includes establishments primarily composed of manufacturing facilities (shipyards) for (1) construction of ships; their repair, conversion and alteration, (2) the production of prefabricated ship and barge sections, and (3) specialized services such as ship scaling. These facilities comprising drydocks and fabrication equipment are capable of building ships or watercraft typically suitable or intended for commercial / non-recreational use, as well as manufacture of boats largely intended for personal use.

- There are 37 establishments in this sector employing approximately 5,237 people.
- The average wage per worker is \$38,578.
- There are approximately 20 boat manufacturing plants in Tennessee. The largest being Sea Ray Boats in Knoxville, Vonoe Mastercraft Boat Company in Vonore, Stratos/Javelin Boats in Murfreesboro, and Triton Boats in Ashland City.

## OTHER TRANSPORTATION EQUIPMENT MANUFACTURING

This subsector primarily comprises establishments engaged in the manufacture of motorcycles, bicycles, metal tricycles, complete military armored vehicles, tanks, self-propelled weapons, vehicles pulled by draft animals, and other transportation equipment (except motor vehicles, boats, ships, railroad rolling stock, and aerospace products) including their component parts.

- There are **25 establishments** in this sector employing approximately **260 people**.
- The average wage for workers in this industry is \$36,234.
- The **two largest employers** are **Miller Industries Inc.** employing approximately **400 people**, and **American Bicycle Group** employing approximately **210 people**. Both are located in Monroe County.

Sources: 2009Tennessee Economic Report to the Governor  
North American Industrial Classification System 2007  
2007 Trend Data, ECD Research and Planning  
Harris InfoSource, 2008

## DID YOU KNOW?...

- The brand name “Litespeed” titanium frame bicycles were first built in Ooltewah, TN.



- **Miller Industries** is the world's largest manufacturer of towing equipment with subsidiaries in France and the U.K.

*Photos courtesy of LiteSpeed and Miller Industries*





## NUMBER OF COMPANIES AND EMPLOYEES BY GRAND DIVISION MANUFACTURING SECTORS

### WEST

65 Companies  
5,511 Employees

### MIDDLE

173 Companies  
32,811 Employees

### EAST

166 Companies  
21,211 Employees



*Transportation equipment is the largest manufacturing export in Tennessee, comprising nearly one fifth (19%) of total manufacturing exports from Tennessee.*

*The graph shows a breakdown of Tennessee's exports by industry.*



Source: Trade Stats Express, State Export Data 2008

***For the five year period from 2003 to 2008 the total value of transportation equipment exported from Tennessee rose by about 68% from just over \$2.4 billion to nearly \$4.03 billion. The adjacent table lists the top twenty foreign markets to which transportation equipment is exported from Tennessee.***

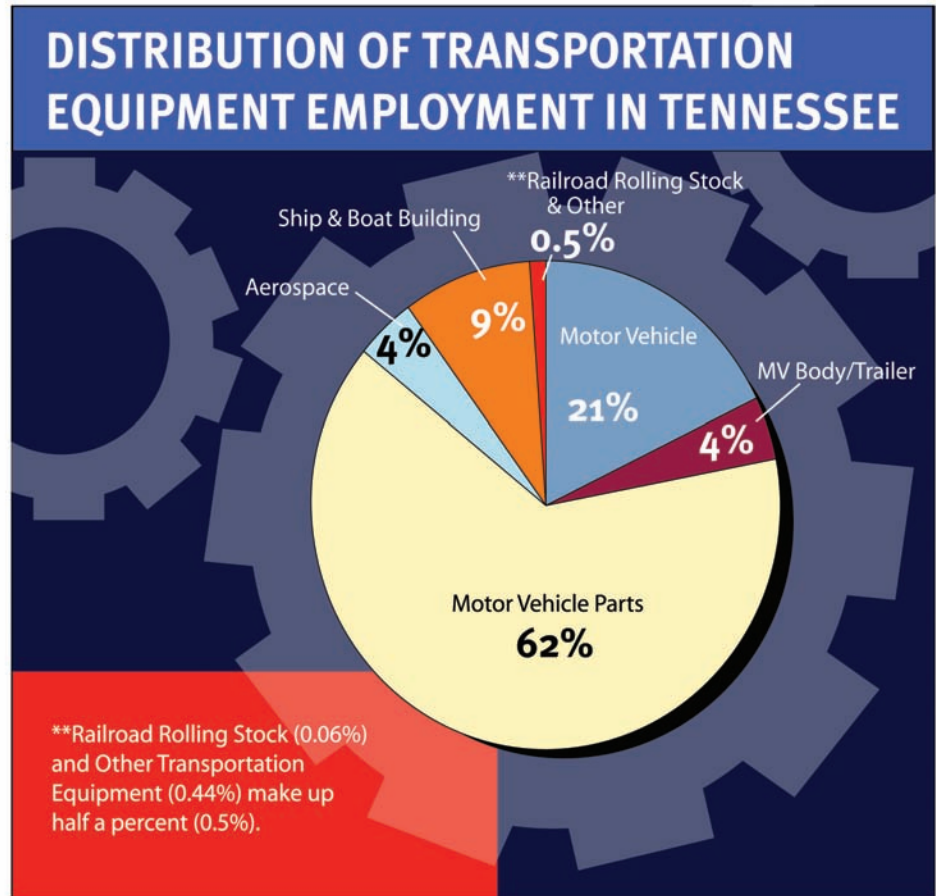
*Note: Canada, Mexico and Singapore are the largest markets for Tennessee produced transportation equipment.*

<b>TOP EXPORT PARTNERS</b> <i>(Thousands \$ US)</i>			
	<b>2000</b>	<b>2007</b>	
Partner	Export Value (\$)	Export Value (\$)	% change
<b>Canada</b>	1,248,455,048	1,594,136,300	27.7
<b>Mexico</b>	585,288,786	571,415,655	-2.4
<b>Singapore</b>	39,922,918	295,101,947	639.2
<b>United Kingdom</b>	240,681,608	242,546,576	0.8
<b>United Arab Emirates</b>	4,219,485	165,432,642	3820.7
<b>Saudi Arabia</b>	6,981,865	119,145,691	1606.5
<b>Spain</b>	17,431,436	105,245,431	503.8
<b>Japan</b>	143,981,994	101,389,231	-29.6
<b>South Korea</b>	19,449,354	84,308,369	333.5
<b>Australia</b>	21,847,245	59,721,537	173.4
<b>Qatar</b>	194,317	53,070,197	27211.1
<b>Brazil</b>	57,479,271	52,382,914	-8.9
<b>Germany</b>	92,865,908	48,938,899	-47.3
<b>Kuwait</b>	2,321,028	47,130,712	1930.6
<b>Taiwan</b>	15,334,541	44,278,996	188.8
<b>Italy</b>	45,649,036	39,753,239	-12.9
<b>Belgium</b>	17,049,851	37,477,070	119.8
<b>Russian Federation</b>	683,610	36,825,472	5286.9
<b>Thailand</b>	645,680	33,617,968	5106.6
<b>Luxembourg</b>	143,685	33,019,123	22880.2
<i>Source: Trade Stats Express, State Export Data 2008</i>			



*Motor vehicle part production represents the bulk of transportation equipment employment, followed by motor vehicle assembly and ship and boat building.*

*The graph shows the employment breakdown in this industry by sector.*



Source: 2007 Trend Data, ECD Research and Planning

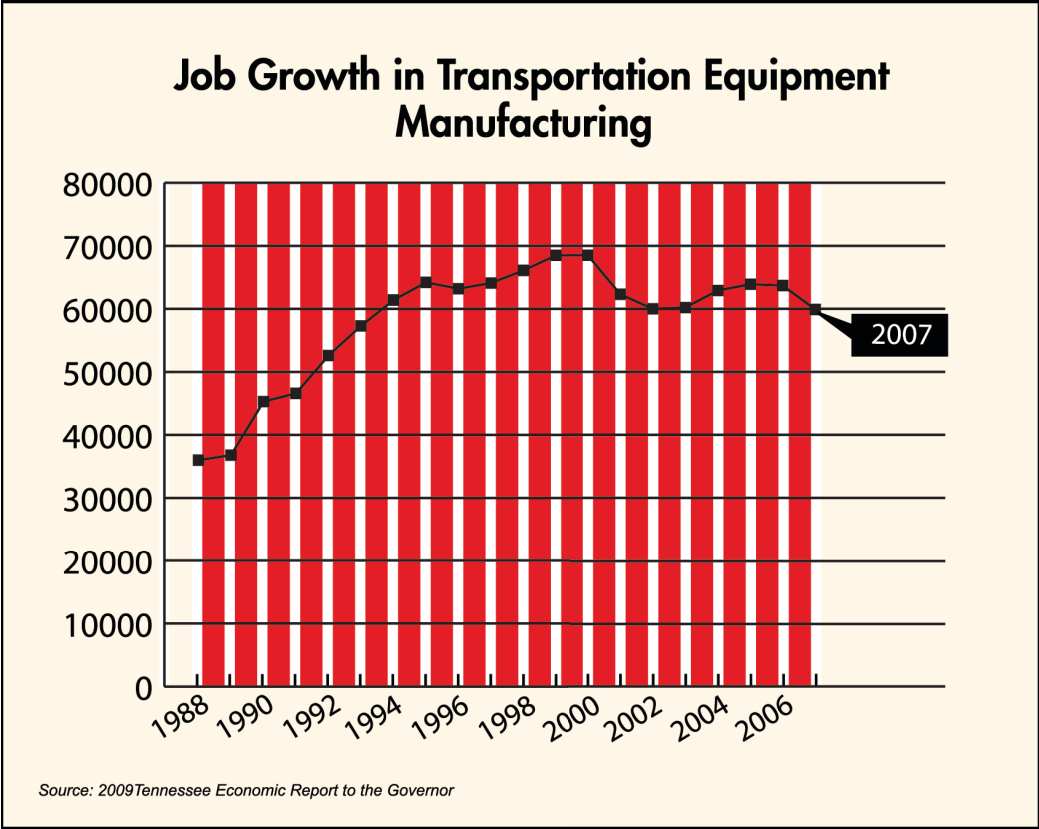
**Tennessee's two largest employers within this industry are Nissan North America Inc., whose facility in Rutherford County employs 4,400 and Denso Manufacturing whose facility in Blount County employs 3,300.**

*The table provides a list of the top twenty employers in this industry in Tennessee.*

TOP TWENTY EMPLOYERS		
COMPANY	COUNTY	EMPLOYEES
Nissan North America, Inc.	Rutherford	4,400
Denso Manufacturing Tennessee, Inc	Blount	3,000
Volkswagen of America	Hamilton	2000
Nissan Power Train Assembly, Decherd	Franklin	1,400
Vought Aircraft Industries, Inc.	Davidson	1,300
Federal - Mogul Corporation	DeKalb	1,250
Yorozu Autonotive Tennessee	Warren	1,100
Mahle	Hamblen	1,069
Nissan North America, Inc.	Williamson	1,050
M-Tek, Inc.	Coffee	1,050
Excide Corporation, Battery Division	Sullivan	922
Calsonickansei North America	Bedford	879
Johnson Controls, Inc., Automotive System	McMinn	700
Shiroki North America, Inc.	DeKalb	667
JTEKT Automotive Tennessee - Vonroe, Inc.	Monroe	615
ARC Automotive, Inc.	Knox	610
Eagle Bend Manufacturing	Anderson	600
Exedy America Corporation	Knox	595
Hutchinson Fts	Overton	588
International Steel Solutions	Giles	578
Source: Harris Info Source, 2008		

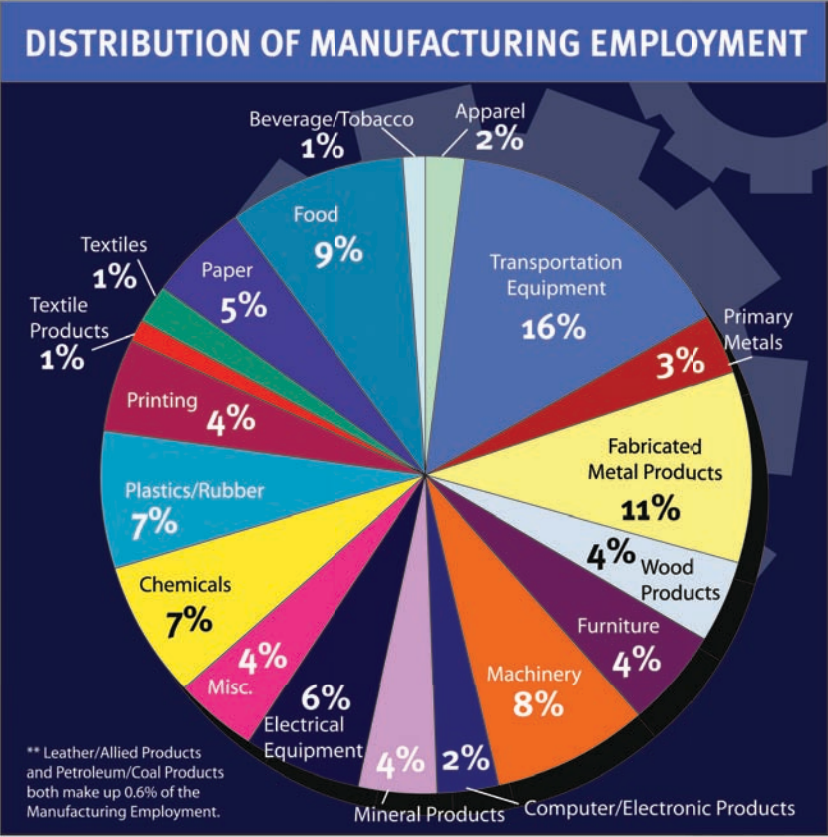
*The number of Tennesseans employed in the manufacture of transportation equipment has increased considerably over the last two decades.*

*The graph below shows this crease from 1985 to 2007.*



*The Transportation Equipment industry is the largest area of manufacturing employment distribution, accounting for 16% of the state's manufacturing employment. It is followed by fabricated metals, food, machinery, chemicals, and rubber and plastic.*

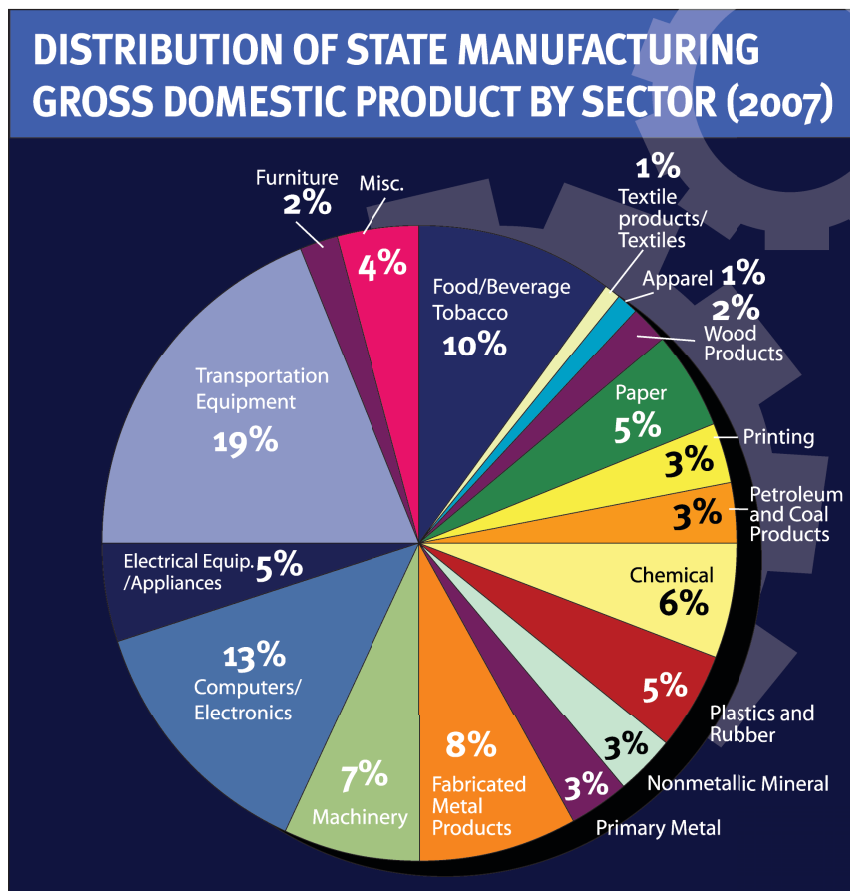
*A breakdown of manufacturing employment by industry is represented in the graph.*



Source: 2007 Trend Data, ECD Research and Planning

*The Transportation Equipment industry accounts for 19% of Tennessee's manufacturing Gross Domestic Product (GDP), making it the largest sector.*

*A breakdown of Tennessee's manufacturing GDP by sector is illustrated in the graph.*



Sources: 2009Tennessee Economic Report to the Governor





## **KINGSLEY BROCK**

BUSINESS DEVELOPMENT DIVISION

615.532.9821

[HTTP://WWW.TNECD.GOV](http://www.tnecd.gov)



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## REFERENCES

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